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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/516,918

07/08/2005

Meinhard Schwefer

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30678

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EXAMINER

VANOY, TIMOTHY C

ART UNIT

PAPER NUMBER

1754

MAIL DATE

DELIVERY MODE

09/11/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/516,918	Applicant(s) SCHWEFER ET AL.	
	Examiner Timothy C. Vanoy	Art Unit 1754	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16-20 is/are allowed.
- 6) ☒ Claim(s) 1-15 and 21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>Dec. 6, 2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

In the IDS filed on Dec. 6, 2004, only one PTO-1449 form has been found in the application file wrapper (even though this PTO-1449 had been labeled "Sheet 1 of 2").

Oath/Declaration

The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration filed on July 8, 2005 is defective because: (i) non-initialled and non-dated alterations have been made to the mailing address of the inventor Meinhard Schwefer, and (ii) non-initialled and non-dated alterations have been made to the residence and mailing address of the inventor Michael Groves.

Specification

a) Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. **It is important that the abstract not exceed 150 words in length** since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be

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avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

In this application, the abstract exceeds 150 words in length and is (therefore) too long.

- b) The specification should be amended to include a "Brief Description of the Drawings" with a brief description of each of the figures, individually.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 15 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a) In claims 1 and 15, the phrase "in particular" renders the claims vague and indefinite because preferences and examples are properly set forth in the specification rather than the claims: please see section 2173.05(d) in the MPEP.
- b) In claim 21, the phrase "preferably" renders the claim vague and indefinite because preferences and examples are properly set forth in the specification rather than the claims: please see section 2173.05(d) in the MPEP.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

The person having ordinary skill in the art has the capability of understanding the scientific and engineering principles applicable to the claimed invention. The references of record in this application reasonably reflect this level of skill.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 01/51181 A1 to Schwefer et al.

The English abstract of WO-181 describes a method for removing NO_x and N_2O out of process gases and exhaust gases, comprising:

passing the contaminated gas through a first reaction zone containing an iron-loaded zeolite so that N_2O is removed from the contaminated gas;

injecting ammonia into the contaminated gas, and

passing the ammonia/contaminated gas mixture through a second reaction zone also containing an iron-loaded zeolite so that NO_x is removed from the gas.

Pg. 7 Ins. 22-33 in the text of WO-181 seems to teach that the reaction zones are operated at a temperature of less than 500°C ; the reaction zones are operated at a pressure of 1 to 50 bars, and the gas passing through the reaction zones are at a space velocity ranging from 2 to $200,000\text{ hours}^{-1}$.

The difference between the applicants' claims and WO-181 is that the applicants' claim 1 step (e) sets forth that the a space velocity is selected in the first and second catalyst beds such that a reduction in the N_2O content of the gas is not more than 90% in the first catalyst bed, based on the N_2O content at the entrance to the first catalyst bed and an N_2O content of greater than 200 ppm is established, and also that a further reduction of the N_2O content by at least 30% occurs in the second catalyst bed, based on the N_2O content to the entrance of the second catalyst bed, however it is submitted that this difference would have been obvious to one of ordinary skill in the art at the time the invention was made because no perceptible differences are seen or have been shown between the applicants' space velocity and the space velocity ranging from 2 to $200,000\text{ hours}^{-1}$ set forth on pg. 7 Ins. 32-33 in the text of WO-181.

Claims 15-21 have not been rejected under either 35USC102 or 35USC103 because the applicants' independent claim 15 has limited at least one of the catalyst beds to be configured as a hollow cylinder through which the NO_x and N₂O-containing gas flows radially, and this feature is not taught or suggested in WO 01/51181 A1.

The following references are made of record:

US 2002/0039550 A1 disclosing a process and catalyst for reducing nitrogen oxides, and


U. S. Pat. 7,238,641 B2 disclosing a catalyst based on ferrierite/iron for the catalytic reduction of nitrous oxide.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy C. Vanoy whose telephone number is 571-272-8158. The examiner can normally be reached on Mon-Fri 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman, can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Timothy C Vanoy
Primary Examiner
Art Unit 1754

tcv